Sulfur oxides (SO_x/Sulfates)

Human Health Risk	M - L
Ecological Risk	
Socioeconomic Risk	M

Sulfur dioxide(SO_2) is the primary component of the class of air pollutants known as oxides of sulfur (SO_x). It is a product of fossil fuel combustion, primarily coal, and is a by-product of several chemical processes such as paper manufacture and smelting. This issue summary focuses on the human health impacts from sulfur dioxide.

What's at risk?

SO_x is a respiratory irritant. Elevated concentrations of SO_x cause respiratory problems. At particular risk are asthmatics and children. For asthmatics, exposure to SO_x increases incidence of asthmatic attacks. For children, there is evidence of increased incidence of respiratory disease and some evidence that SO_x exposure reduces their ability to respond to infection. SO_x also causes decreases in visibility which is of particular interest in recreation areas with important viewsheds.

What are the human health impacts in New Jersey?

The concentration of SO_x in New Jersey is below federal health-based regulatory standards, but concentrations are slightly elevated in some counties, possibly decreasing the ability of approximately 100,000 children who live in these counties to respond to infection. Throughout the state there is a slight chance that children will have increased incidence of respiratory disease as a result of SO_x exposure.

What are the socioeconomic impacts in New Jersey?

The greatest impacts are due to aesthetic degradation. A national study showed significant visibility benefits from reductions of sulfur dioxide, of which New Jersey should gain a part.

What's being done?

Federal regulations have reduced the emissions from most point sources significantly. Additional regulations are pending which may further reduce sulfur emissions.